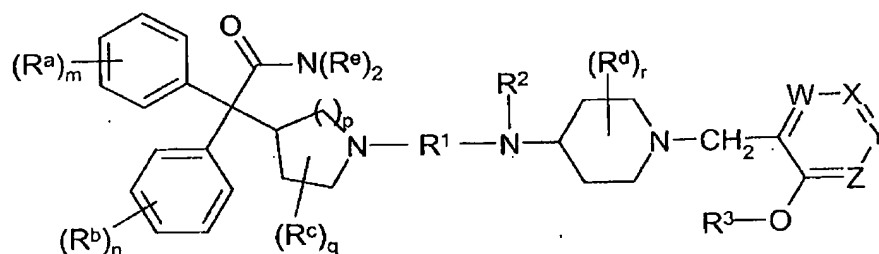


U.S. Application No. 10/696,464
 Attorney Docket No. P-142-US1
 Page 2 of 29

II. AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in this application.

1. (Currently Amended) A compound of formula I:

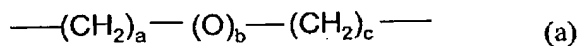


I

wherein

W, *X*, *Y* and *Z* are independently selected from the group consisting of CH, CR⁴, N and N-O; provided that at least one and no more than two of *W*, *X*, *Y* and *Z* are N or N-O;

R¹ is a group of formula (a):



wherein each -CH₂- group in formula (a) and the -CH₂- group between the piperidine nitrogen atom and the ring containing *W*, *X*, *Y* and *Z* in formula I is optionally substituted with 1 or 2 substituents independently selected from the group consisting of C₁₋₂ alkyl and fluoro; wherein each alkyl group is optionally substituted with 1 to 3 fluoro substituents;

U.S. Application No. 10/696,464
Attorney Docket No. P-142-US1
Page 3 of 29

R^2 is selected from the group consisting of hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-6} cycloalkyl, $-CH_2-R^5$ and $-(CH_2)_x-R^6$; wherein each alkyl, alkenyl, alkynyl and cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents;

each R^3 is independently selected from the group consisting of hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-6} cycloalkyl, $-CH_2-R^7$ and $-(CH_2)_y-R^8$; wherein each alkyl, alkenyl, alkynyl and cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents;

each R^4 is independently selected from the group consisting of C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-6} cycloalkyl, $-OR^3$ and halo; or two adjacent R^4 groups are joined to form C_{3-6} alkylene, $-O-(C_{2-4}$ alkylene)-, $-O-(C_{1-4}$ alkylene)-O-, $-(O)C-CH=CH-$ or $-CH=CH-C(O)-$; or when Z is CR^4 , $-OR^3$ and R^4 are joined to form $-O-(C_{2-5}$ alkylene)- or $-O-(C_{1-5}$ alkylene)-O-; wherein each alkyl, alkylene, alkenyl, alkynyl and cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents;

each R^5 and R^7 is independently selected from the group consisting of C_{3-5} cycloalkyl, C_{6-10} aryl, $-C(O)(C_{6-10}$ aryl), C_{2-9} heteroaryl, $-C(O)(C_{2-9}$ heteroaryl) and C_{3-6} heterocyclic; wherein the cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents; and the aryl, heteroaryl and heterocyclic groups are optionally substituted with 1 to 3 substituents independently selected from R^k and the aryl and heteroaryl groups are optionally further substituted with a phenyl group, where the phenyl group is optionally substituted with 1 to 3 substituents independently selected from R^k ;

each R^6 and R^8 is independently selected from the group consisting of $-OH$, $-OR^9$, $-SR^9$, $-S(O)R^9$, $-S(O)_2R^9$, $-C(O)R^9$, C_{3-5} cycloalkyl, C_{6-10} aryl, C_{2-9} heteroaryl and C_{3-6} heterocyclic; wherein the cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents; and the aryl, heteroaryl and heterocyclic groups are optionally substituted with 1 to 3 substituents independently selected from R^k ;

each R^9 is independently selected from the group consisting of C_{1-4} alkyl, C_{3-5} cycloalkyl, C_{6-10} aryl and C_{2-9} heteroaryl; wherein the alkyl and cycloalkyl groups are

U.S. Application No. 10/696,464
Attorney Docket No. P-142-US1
Page 4 of 29

optionally substituted with 1 to 5 fluoro substituents; and the aryl and heteroaryl groups are optionally substituted with 1 to 3 substituents independently selected from R^k ;

each R^a and R^b is independently selected from the group consisting of C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl, C_{3-6} cycloalkyl, cyano, halo, $-OR^f$, $-SR^f$, $-S(O)R^f$, $-S(O)_2R^f$ and $-NR^gR^h$; or two adjacent R^a groups or two adjacent R^b groups are joined to form C_{3-6} alkylene, $-(C_{2-4} \text{ alkylene})-O-$ or $-O-(C_{1-4} \text{ alkylene})-O-$; wherein each alkyl, alkylene, alkenyl, alkynyl and cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents;

each R^c and R^d is independently selected from the group consisting of C_{1-4} alkyl and fluoro; wherein each alkyl group is optionally substituted with 1 to 5 fluoro substituents;

each R^e is independently selected from the group consisting of hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-6} cycloalkyl, C_{6-10} aryl, C_{2-9} heteroaryl, C_{3-6} heterocyclic, $-CH_2-R^i$ and $-CH_2CH_2-R^j$; or both R^e groups are joined together with the nitrogen atom to which they are attached to form C_{3-6} heterocyclic; wherein each alkyl, alkenyl, alkynyl and cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents; and each aryl, heteroaryl and heterocyclic group is optionally substituted with 1 to 3 substituents independently selected from R^k ;

each R^f is independently selected from the group consisting hydrogen, C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl and C_{3-6} cycloalkyl; wherein each alkyl, alkenyl, alkynyl and cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents;

each R^g and R^h is independently selected from the group consisting of hydrogen, C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl and C_{3-6} cycloalkyl; or R^g and R^h are joined together with the nitrogen atom to which they are attached to form C_{3-6} heterocyclic; wherein each alkyl, alkenyl, alkynyl and cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents, and the heterocyclic group is optionally substituted with 1 to 3 substituents independently selected from C_{1-4} alkyl and fluoro;

each R^i is independently selected from the group consisting of C_{3-6} cycloalkyl, C_{6-10} aryl, C_{2-9} heteroaryl and C_{3-6} heterocyclic; wherein aryl, cycloalkyl, heteroaryl and

U.S. Application No. 10/696,464
 Attorney Docket No. P-142-US1
 Page 5 of 29

heterocyclic group is optionally substituted with 1 to 3 substituents independently selected from R^k ;

each R^j is independently selected from the group consisting of C_{3-6} cycloalkyl, C_{6-10} aryl, C_{2-9} heteroaryl, C_{3-6} heterocyclic, $-OH$, $-O(C_{1-6} \text{ alkyl})$, $-O(C_{3-6} \text{ cycloalkyl})$, $-O(C_{6-10} \text{ aryl})$, $-O(C_{2-9} \text{ heteroaryl})$, $-S(C_{1-6} \text{ alkyl})$, $-S(O)(C_{1-6} \text{ alkyl})$, $-S(O)_2(C_{1-6} \text{ alkyl})$, $-S(C_{3-6} \text{ cycloalkyl})$, $-S(O)(C_{3-6} \text{ cycloalkyl})$, $-S(O)_2(C_{3-6} \text{ cycloalkyl})$, $-S(C_{6-10} \text{ aryl})$, $-S(O)(C_{6-10} \text{ aryl})$, $-S(O)_2(C_{6-10} \text{ aryl})$, $-S(C_{2-9} \text{ heteroaryl})$, $-S(O)(C_{2-9} \text{ heteroaryl})$ and $-S(O)_2(C_{2-9} \text{ heteroaryl})$; wherein each alkyl group is optionally substituted with 1 to 5 fluoro substituents; and each aryl, cycloalkyl, heteroaryl and heterocyclic group is optionally substituted with 1 to 3 substituents independently selected from R^k ;

each R^k is independently selected from the group consisting of C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl, cyano, halo, $-OR^f$, $-SR^f$, $-S(O)R^f$, $-S(O)_2R^f$ and $-NR^gR^h$; or two adjacent R^k groups are joined to form C_{3-6} alkylene, $-(C_{2-4} \text{ alkylene})-O-$ or $-O-(C_{1-4} \text{ alkylene})-O-$; wherein each alkyl, alkylene, alkenyl and alkynyl group is optionally substituted with 1 to 5 fluoro substituents;

a is an integer from 2 to 7;

b is 0 or 1;

c is an integer from 2 to 7; provided that $a + b + c$ equals 7, 8 or 9;

m is an integer from 0 to 3;

n is an integer from 0 to 3;

p is 1 or 2;

q is an integer from 0 to 4;

r is an integer from 0 to 4;

x is an integer from 2 to 4;

y is an integer from 2 to 4;

or a pharmaceutically-acceptable salt or solvate or stereoisomer thereof.

2. (Original) The compound according to Claim 1, wherein R^1 is selected from the group consisting of $-(CH_2)_7-$, $-(CH_2)_8-$, $-(CH_2)_9-$, $-(CH_2)_2-O-(CH_2)_4-$,

U.S. Application No. 10/696,464

Attorney Docket No. P-142-US1

Page 6 of 29

$-(CH_2)_2-O-(CH_2)_5-$, $-(CH_2)_2-O-(CH_2)_6-$, $-(CH_2)_3-O-(CH_2)_3-$, $-(CH_2)_3-O-(CH_2)_4-$,
 $-(CH_2)_3-O-(CH_2)_5-$, $-(CH_2)_4-O-(CH_2)_2-$, $-(CH_2)_4-O-(CH_2)_3-$,
 $-(CH_2)_4-O-(CH_2)_4-$, $-(CH_2)_5-O-(CH_2)_2-$, $-(CH_2)_5-O-(CH_2)_3-$ and
 $-(CH_2)_6-O-(CH_2)_2-$.

3. (Original) The compound according to Claim 2, wherein R^1 is $-(CH_2)_7-$, $-(CH_2)_8-$, $-(CH_2)_9-$, $-(CH_2)_3-O-(CH_2)_3-$ or $-(CH_2)_4-O-(CH_2)_4-$.

4. (Original) The compound according to Claim 3, wherein R^1 is $-(CH_2)_7-$.

5. (Original) The compound according to Claim 1, wherein R^2 is C_{1-4} alkyl; wherein the alkyl group is optionally substituted with 1 to 3 fluoro substituents.

6. (Original) The compound according to Claim 5, wherein R^2 is selected from the group consisting of methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl and isobutyl.

7. (Original) The compound according to Claim 1, wherein R^2 is $-CH_2-R^5$.

8. (Original) The compound according to Claim 7, wherein R^2 is selected from the group consisting of:

(a) $-CH_2-(C_{3-5} \text{ cycloalkyl})$; wherein the cycloalkyl group is optionally substituted with 1 to 3 fluoro substituents;

(b) $-CH_2-(\text{phenyl})$, wherein the phenyl group is optionally substituted with 1 to 3 substituents independently selected from R^k ;

(c) $-CH_2-(\text{naphthyl})$; wherein the naphthyl group is optionally substituted with 1 to 3 substituents independently selected from R^k ;

(d) $-CH_2-(\text{biphenyl})$, wherein each phenyl ring of the biphenyl group is optionally substituted with 1 to 3 substituents independently selected from R^k ;

U.S. Application No. 10/696,464
Attorney Docket No. P-142-US1
Page 7 of 29

(e) $-\text{CH}_2-(\text{pyridyl})$; wherein the pyridyl group is optionally substituted with 1 to 3 substituents independently selected from R^k ; and

(f) $-\text{CH}_2\text{C}(\text{O})-(\text{phenyl})$, wherein the phenyl ring of the phenacyl group is optionally substituted with 1 to 3 substituents independently selected from R^k .

9. (Original) The compound according to Claim 8, wherein R^2 is selected from the group consisting of cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, benzyl, 4-cyanobenzyl, 4-methylbenzyl, 4-trifluoromethoxybenzyl, 4-difluoromethoxybenzyl, 4-thiomethoxybenzyl, 4-methanesulfonylbenzyl, 4-*tert*-butylbenzyl, 4-phenylbenzyl, pyridyl-2-ylmethyl, pyrid-3-ylmethyl, naphth-2-ylmethyl, 3-cyanophenacyl, and 3,4-ethylenedioxyphenacyl.

10. (Original) The compound according to Claim 1, wherein R^2 is $-(\text{CH}_2)_x-\text{R}^6$, wherein x is 2, 3 or 4.

11. (Original) The compound according to Claim 10, wherein R^2 is selected from the group consisting of:

(a) $-(\text{CH}_2)_x-\text{OH}$;

(b) $-(\text{CH}_2)_x-\text{O}(\text{C}_{1-4} \text{ alkyl})$; wherein the alkyl group is optionally substituted with 1 to 3 fluoro substituents;

(c) $-(\text{CH}_2)_x-\text{S}(\text{C}_{1-4} \text{ alkyl})$, $-(\text{CH}_2)_x-\text{S}(\text{O})(\text{C}_{1-4} \text{ alkyl})$, or $-(\text{CH}_2)_x-\text{S}(\text{O})_2(\text{C}_{1-4} \text{ alkyl})$; wherein the alkyl group is optionally substituted with 1 to 3 fluoro substituents;

(d) $-(\text{CH}_2)_x-(\text{phenyl})$, wherein the phenyl group is optionally substituted with 1 to 3 substituents independently selected from R^k ;

(e) $-(\text{CH}_2)_x-(\text{O-phenyl})$, wherein the phenyl group is optionally substituted with 1 to 3 substituents independently selected from R^k ;

(f) $-(\text{CH}_2)_x-(\text{naphthyl})$, wherein the naphthyl group is optionally substituted with 1 to 3 substituents independently selected from R^k ; and

U.S. Application No. 10/696,464
Attorney Docket No. P-142-US1
Page 8 of 29

(g) $-(CH_2)_x-(indolyl)$, wherein the indolyl group is optionally substituted with 1 to 3 substituents independently selected from R^k .

12. (Original) The compound according to Claim 11, wherein R^2 is selected from the group consisting of 2-hydroxyethyl, 2-methoxyethyl, 2-(methylthio)ethyl, 2-ethoxyethyl, 2-(ethylthio)ethyl, 2-(2,2,2-trifluoroethoxy)ethyl, 2-phenethyl, 2-(naphth-1-yl)ethyl, 2-(indol-3-yl)ethyl, 3-hydroxypropyl, 3-methoxypropyl, 3-ethoxypropyl, 3-phenylpropyl and 3-phenoxypropyl.

13. (Original) The compound according to Claim 1, wherein R^2 is ethyl, *n*-propyl, isopropyl, cyclopropylmethyl or 2-hydroxyethyl.

14. (Original) The compound according to Claim 1, wherein each R^3 is independently selected from the group consisting of hydrogen, C_{1-4} alkyl, cyclopropylmethyl and 2-hydroxyethyl; wherein each alkyl group is optionally substituted with 1 to 5 fluoro substituents.

15. (Original) The compound according to Claim 14, wherein each R^3 is independently selected from the group consisting of hydrogen, methyl, ethyl, *n*-propyl, isopropyl, difluoromethyl, trifluoromethyl, 2,2,2-trifluoroethyl, 1,3-difluoroprop-2-yl, 1,1,3-trifluoroprop-2-yl, and 1,1,3,3-tetrafluoroprop-2-yl.

16. (Original) The compound according to Claim 1, wherein R^4 is selected from the group consisting of C_{1-4} alkyl, $-OR^3$ and halo; wherein the alkyl group is optionally substituted with 1 to 5 fluoro substituents.

17. (Original) The compound according to Claim 16, wherein R^4 is methyl, $-OR^3$, fluoro or chloro.

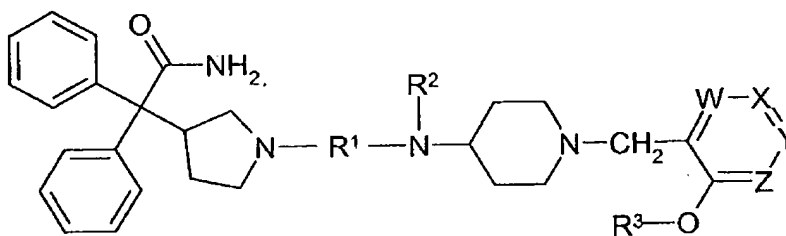
U.S. Application No. 10/696,464
 Attorney Docket No. P-142-US1
 Page 9 of 29

18. (Original) The compound according to Claim 1, wherein *W*, *X*, *Y* and *Z* are defined as follows:

- (a) *W* is N; *X* is CH; *Y* is CH; and *Z* is CH;
- (b) *W* is CH or CR⁴; *X* is N; *Y* is CH and *Z* is CH;
- (c) *W* is CH or CR⁴; *X* is CH; *Y* is N; and *Z* is CH;
- (d) *W* is CH or CR⁴; *X* is CH; *Y* is CH; and *Z* is N; or
- (e) *W* is CH; *X* is N; *Y* is CH and *Z* is CH.

19. (Original) The compound according to Claim 18, wherein *W* is CH; *X* is N; *Y* is CH and *Z* is CH.

20. (Currently Amended) A compound of formula II:

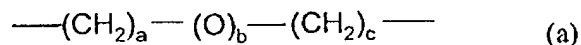


II

wherein

W, *X*, *Y* and *Z* are independently selected from the group consisting of CH, CR⁴, N and N-O; provided that at least one and no more than two of *W*, *X*, *Y* and *Z* are N or N-O;

R¹ is a group of formula (a):



U.S. Application No. 10/696,464
Attorney Docket No. P-142-US1
Page 10 of 29

wherein each $-\text{CH}_2-$ group in formula (a) and the $-\text{CH}_2-$ group between the piperidine nitrogen atom and the ring containing W , X , Y and Z in formula II is optionally substituted with 1 or 2 substituents independently selected from the group consisting of C_{1-2} alkyl and fluoro; wherein each alkyl group is optionally substituted with 1 to 3 fluoro substituents;

R^2 is selected from the group consisting of hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-6} cycloalkyl, $-\text{CH}_2-\text{R}^5$ and $-(\text{CH}_2)_x-\text{R}^6$; wherein each alkyl, alkenyl, alkynyl and cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents;

each R^3 is independently selected from the group consisting of hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-6} cycloalkyl, $-\text{CH}_2-\text{R}^7$ and $-(\text{CH}_2)_y-\text{R}^8$; wherein each alkyl, alkenyl, alkynyl and cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents;

each R^4 is independently selected from the group consisting of C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-6} cycloalkyl, $-\text{OR}^3$ and halo; or two adjacent R^4 groups are joined to form C_{3-6} alkylene, $-\text{O}-(\text{C}_{2-4} \text{ alkylene})-$, $-\text{O}-(\text{C}_{1-4} \text{ alkylene})-\text{O}-$, $-(\text{O})\text{C}-\text{CH}=\text{CH}-$ or $-\text{CH}=\text{CH}-\text{C}(\text{O})-$; or when Z is CR^4 , $-\text{OR}^3$ and R^4 are joined to form $-\text{O}-(\text{C}_{2-5} \text{ alkylene})-$ or $-\text{O}-(\text{C}_{1-5} \text{ alkylene})-\text{O}-$; wherein each alkyl, alkylene, alkenyl, alkynyl and cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents;

each R^5 and R^7 is independently selected from the group consisting of C_{3-5} cycloalkyl, C_{6-10} aryl, $-\text{C}(\text{O})(\text{C}_{6-10} \text{ aryl})$, C_{2-9} heteroaryl, $-\text{C}(\text{O})(\text{C}_{2-9} \text{ heteroaryl})$ and C_{3-6} heterocyclic; wherein the cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents; and the aryl, heteroaryl and heterocyclic groups are optionally substituted with 1 to 3 substituents independently selected from R^k and the aryl and heteroaryl groups are optionally further substituted with a phenyl group, where the phenyl group is optionally substituted with 1 to 3 substituents independently selected from R^k ;

each R^6 and R^8 is independently selected from the group consisting of $-\text{OH}$, $-\text{OR}^9$, $-\text{SR}^9$, $-\text{S}(\text{O})\text{R}^9$, $-\text{S}(\text{O})_2\text{R}^9$, $-\text{C}(\text{O})\text{R}^9$, C_{3-5} cycloalkyl, C_{6-10} aryl, C_{2-9} heteroaryl and C_{3-6} heterocyclic; wherein the cycloalkyl group is optionally substituted with 1 to 5

U.S. Application No. 10/696,464
Attorney Docket No. P-142-US1
Page 11 of 29

fluoro substituents; and the aryl, heteroaryl and heterocyclic groups are optionally substituted with 1 to 3 substituents independently selected from R^k ;

each R^9 is independently selected from the group consisting of C_{1-4} alkyl, C_{3-5} cycloalkyl, C_{6-10} aryl and C_{2-9} heteroaryl; wherein the alkyl and cycloalkyl groups are optionally substituted with 1 to 5 fluoro substituents; and the aryl and heteroaryl groups are optionally substituted with 1 to 3 substituents independently selected from R^k ;

each R^f is independently selected from the group consisting hydrogen, C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl and C_{3-6} cycloalkyl; wherein each alkyl, alkenyl, alkynyl and cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents;

each R^e and R^h is independently selected from the group consisting of hydrogen, C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl and C_{3-6} cycloalkyl; or R^e and R^h are joined together with the nitrogen atom to which they are attached to form C_{3-6} heterocyclic; wherein each alkyl, alkenyl, alkynyl and cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents, and the heterocyclic group is optionally substituted with 1 to 3 substituents independently selected from C_{1-4} alkyl and fluoro;

each R^k is independently selected from the group consisting of C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl, cyano, halo, $-OR^f$, $-SR^f$, $-S(O)R^f$, $-S(O)_2R^f$ and $-NR^gR^h$; or two adjacent R^k groups are joined to form C_{3-6} alkylene, $-(C_{2-4} \text{ alkylene})-O-$ or $-O-(C_{1-4} \text{ alkylene})-O-$; wherein each alkyl, alkylene, alkenyl and alkynyl group is optionally substituted with 1 to 5 fluoro substituents;

a is an integer from 2 to 7;

b is 0 or 1;

c is an integer from 2 to 7; provided that $a + b + c$ equals 7, 8 or 9;

x is an integer from 2 to 4;

y is an integer from 2 to 4;

or a pharmaceutically-acceptable salt or solvate or stereoisomer thereof.

21. (Original) The compound according to Claim 20, wherein R^1 is $-(CH_2)_7-$, $-(CH_2)_8-$, $-(CH_2)_9-$, $-(CH_2)_3-O-(CH_2)_3-$ or $-(CH_2)_4-O-(CH_2)_4-$.

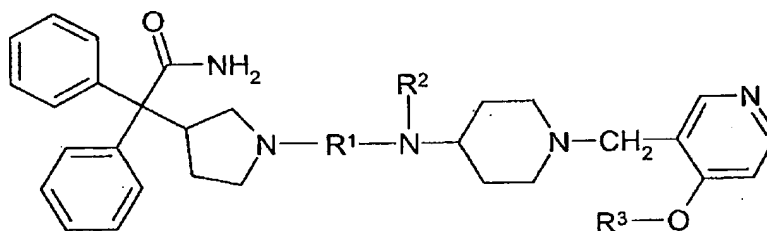
U.S. Application No. 10/696,464
Attorney Docket No. P-142-US1
Page 12 of 29

22. (Original) The compound according to Claim 21, wherein R^2 is C_{1-4} alkyl; wherein the alkyl group is optionally substituted with 1 to 3 fluoro substituents.

23. (Original) The compound according to Claim 22, wherein each R^3 is independently selected from the group consisting of hydrogen, C_{1-4} alkyl, cyclopropylmethyl and 2-hydroxyethyl; wherein each alkyl group is optionally substituted with 1 to 5 fluoro substituents.

24. (Original) The compound according to Claim 23, wherein R^1 is $-(CH_2)_7-$; R^2 is selected from the group consisting of methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl and isobutyl; and each R^3 is independently selected from the group consisting of hydrogen, methyl, ethyl, *n*-propyl, isopropyl, difluoromethyl, trifluoromethyl, 2,2,2-trifluoroethyl, 1,3-difluoroprop-2-yl, 1,1,3-trifluoroprop-2-yl, and 1,1,3,3-tetrafluoroprop-2-yl.

25. (Currently Amended) A compound of formula III:

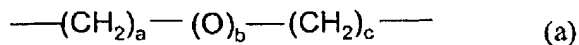


III

wherein

R^1 is a group of formula (a):

U.S. Application No. 10/696,464
 Attorney Docket No. P-142-US1
 Page 13 of 29



wherein each $\text{---CH}_2\text{---}$ group in formula (a) and the $\text{---CH}_2\text{---}$ group between the piperidine nitrogen atom and the pyridine ring in formula III is optionally substituted with 1 or 2 substituents independently selected from the group consisting of C_{1-2} alkyl and fluoro; wherein each alkyl group is optionally substituted with 1 to 3 fluoro substituents;

R^2 is selected from the group consisting of hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-6} cycloalkyl, $\text{---CH}_2\text{---R}^5$ and $\text{---}(\text{CH}_2)_x\text{---R}^6$; wherein each alkyl, alkenyl, alkynyl and cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents;

each R^3 is independently selected from the group consisting of hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-6} cycloalkyl, $\text{---CH}_2\text{---R}^7$ and $\text{---}(\text{CH}_2)_y\text{---R}^8$; wherein each alkyl, alkenyl, alkynyl and cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents;

each R^5 and R^7 is independently selected from the group consisting of C_{3-5} cycloalkyl, C_{6-10} aryl, $\text{---C(O)(C}_{6-10}\text{ aryl)}$, C_{2-9} heteroaryl, $\text{---C(O)(C}_{2-9}\text{ heteroaryl)}$ and C_{3-6} heterocyclic; wherein the cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents; and the aryl, heteroaryl and heterocyclic groups are optionally substituted with 1 to 3 substituents independently selected from R^k and the aryl and heteroaryl groups are optionally further substituted with a phenyl group, where the phenyl group is optionally substituted with 1 to 3 substituents independently selected from R^k ;

each R^6 and R^8 is independently selected from the group consisting of ---OH , ---OR^9 , ---SR^9 , ---S(O)R^9 , $\text{---S(O)}_2\text{R}^9$, ---C(O)R^9 , C_{3-5} cycloalkyl, C_{6-10} aryl, C_{2-9} heteroaryl and C_{3-6} heterocyclic; wherein the cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents; and the aryl, heteroaryl and heterocyclic groups are optionally substituted with 1 to 3 substituents independently selected from R^k ;

each R^9 is independently selected from the group consisting of C_{1-4} alkyl, C_{3-5} cycloalkyl, C_{6-10} aryl and C_{2-9} heteroaryl; wherein the alkyl and cycloalkyl groups are

U.S. Application No. 10/696,464
Attorney Docket No. P-142-US1
Page 14 of 29

optionally substituted with 1 to 5 fluoro substituents; and the aryl and heteroaryl groups are optionally substituted with 1 to 3 substituents independently selected from R^k ;

each R^f is independently selected from the group consisting hydrogen, C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl and C_{3-6} cycloalkyl; wherein each alkyl, alkenyl, alkynyl and cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents;

each R^g and R^h is independently selected from the group consisting of hydrogen, C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl and C_{3-6} cycloalkyl; or R^g and R^h are joined together with the nitrogen atom to which they are attached to form C_{3-6} heterocyclic; wherein each alkyl, alkenyl, alkynyl and cycloalkyl group is optionally substituted with 1 to 5 fluoro substituents, and the heterocyclic group is optionally substituted with 1 to 3 substituents independently selected from C_{1-4} alkyl and fluoro;

each R^k is independently selected from the group consisting of C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl, cyano, halo, $-OR^f$, $-SR^f$, $-S(O)R^f$, $-S(O)_2R^f$ and $-NR^gR^h$; or two adjacent R^k groups are joined to form C_{3-6} alkylene, $-(C_{2-4} \text{ alkylene})-O-$ or $-O-(C_{1-4} \text{ alkylene})-O-$; wherein each alkyl, alkylene, alkenyl and alkynyl group is optionally substituted with 1 to 5 fluoro substituents;

a is an integer from 2 to 7;

b is 0 or 1;

c is an integer from 2 to 7; provided that $a + b + c$ equals 7, 8 or 9;

x is an integer from 2 to 4;

y is an integer from 2 to 4;

or a pharmaceutically-acceptable salt or solvate or stereoisomer thereof.

26. (Original) The compound according to Claim 25, wherein R^1 is $-(CH_2)_7-$, $-(CH_2)_8-$, $-(CH_2)_9-$, $-(CH_2)_3-O-(CH_2)_3-$ or $-(CH_2)_4-O-(CH_2)_4-$.

27. (Original) The compound according to Claim 26, wherein R^2 is C_{1-4} alkyl; wherein the alkyl group is optionally substituted with 1 to 3 fluoro substituents.

U.S. Application No. 10/696,464
Attorney Docket No. P-142-US1
Page 15 of 29

28. (Original) The compound according to Claim 27, wherein each R³ is independently selected from the group consisting of hydrogen, C₁₋₄ alkyl, cyclopropylmethyl and 2-hydroxyethyl; wherein each alkyl group is optionally substituted with 1 to 5 fluoro substituents.

29. (Original) The compound according to Claim 28, wherein R¹ is -(CH₂)₇-;

R² is selected from the group consisting of methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl and isobutyl; and

R³ is selected from the group consisting of hydrogen, methyl, ethyl, *n*-propyl, isopropyl, difluoromethyl, trifluoromethyl, 2,2,2-trifluoroethyl, 1,3-difluoroprop-2-yl, 1,1,3,-trifluoroprop-2-yl, and 1,1,3,3-tetrafluoroprop-2-yl.

30. (Currently Amended) A compound selected from the group consisting of:

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-4-oxahept-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-3-oxahept-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(ethyl)amino}-1-(2-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(ethyl)amino}-1-(3-methoxypyrid-2-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(ethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-4-oxahept-1-yl]-*N*-(ethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

U.S. Application No. 10/696,464

Attorney Docket No. P-142-US1

Page 16 of 29

4- $\{N$ -[8-(3-(S)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]oct-1-yl]- N -(ethylamino)}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4- $\{N$ -[9-(3-(S)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]non-1-yl]- N -(ethylamino)}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4- $\{N$ -[7-(3-(S)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-3-oxahept-1-yl]- N -(ethylamino)}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4- $\{N$ -[8-(3-(S)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-3-oxaoct-1-yl]- N -(ethylamino)}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4- $\{N$ -[9-(3-(S)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-3-oxanon-1-yl]- N -(ethylamino)}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4- $\{N$ -[8-(3-(S)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-4-oxaoct-1-yl]- N -(ethylamino)}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4- $\{N$ -[9-(3-(S)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-4-oxanon-1-yl]- N -(ethylamino)}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4- $\{N$ -[7-(3-(S)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-5-oxahept-1-yl]- N -(ethylamino)}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4- $\{N$ -[8-(3-(S)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-5-oxaoct-1-yl]- N -(ethylamino)}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4- $\{N$ -[9-(3-(S)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-5-oxanon-1-yl]- N -(ethylamino)}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4- $\{N$ -[8-(3-(S)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-6-oxaoct-1-yl]- N -(ethylamino)}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4- $\{N$ -[9-(3-(S)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-6-oxanon-1-yl]- N -(ethylamino)}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4- $\{N$ -[9-(3-(S)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-7-oxanon-1-yl]- N -(ethylamino)}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4- $\{N$ -[7-(3-(S)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]- N -(prop-1-ylamino)}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4- $\{N$ -[8-(3-(S)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]oct-1-yl]- N -(prop-1-ylamino)}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

U.S. Application No. 10/696,464
Attorney Docket No. P-142-US1
Page 17 of 29

- 4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]non-1-yl]-*N*-(prop-1-yl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-3-oxahept-1-yl]-*N*-(prop-1-yl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-3-oxaoct-1-yl]-*N*-(prop-1-yl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-3-oxanon-1-yl]-*N*-(prop-1-yl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-4-oxahept-1-yl]-*N*-(prop-1-yl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-4-oxaoct-1-yl]-*N*-(prop-1-yl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-4-oxanon-1-yl]-*N*-(prop-1-yl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-5-oxahept-1-yl]-*N*-(prop-1-yl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-5-oxaoct-1-yl]-*N*-(prop-1-yl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-5-oxanon-1-yl]-*N*-(prop-1-yl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-6-oxaoct-1-yl]-*N*-(prop-1-yl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-6-oxanon-1-yl]-*N*-(prop-1-yl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-7-oxanon-1-yl]-*N*-(prop-1-yl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(isopropyl)amino}-1-(4-*n*-propoxypyrid-3-ylmethyl)piperidine;

U.S. Application No. 10/696,464

Attorney Docket No. P-142-US1

Page 18 of 29

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(4-isopropoxy-pyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(4-cyclopropyl-methoxy-pyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(4-(2-hydroxyethoxy)pyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(4-isobutoxy-pyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(2,4-dimethoxy-pyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(2-fluoro-4-methoxy-pyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(2-chloro-4-methoxy-pyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(2-methyl-4-methoxy-pyrid-3-ylmethyl)piperidine;

4-{*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]oct-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxy-pyrid-3-ylmethyl)piperidine;

4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]non-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxy-pyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(3-methoxy-pyrid-2-ylmethyl)piperidine;

4-{*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]oct-1-yl]-*N*-(isopropyl)amino}-1-(3-methoxy-pyrid-2-ylmethyl)piperidine;

4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]non-1-yl]-*N*-(isopropyl)amino}-1-(3-methoxy-pyrid-2-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(3-methoxy-pyrid-4-ylmethyl)piperidine;

4-{*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]oct-1-yl]-*N*-(isopropyl)amino}-1-(3-methoxy-pyrid-4-ylmethyl)piperidine;

U.S. Application No. 10/696,464
Attorney Docket No. P-142-US1
Page 19 of 29

- 4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]non-1-yl]-*N*-(isopropyl)amino}-1-(3-methoxypyrid-4-ylmethyl)piperidine;
- 4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(isopropyl)amino}-1-(2-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]oct-1-yl]-*N*-(isopropyl)amino}-1-(2-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]non-1-yl]-*N*-(isopropyl)amino}-1-(2-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-3-oxahept-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-3-oxaoct-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-3-oxanon-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-4-oxahept-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-4-oxanon-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-5-oxaoct-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-5-oxanon-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-6-oxaoct-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-6-oxanon-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;
- 4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-7-oxanon-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

U.S. Application No. 10/696,464

Attorney Docket No. P-142-US1

Page 20 of 29

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(cyclopropylmethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]oct-1-yl]-*N*-(cyclopropylmethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]non-1-yl]-*N*-(cyclopropylmethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-3-oxahept-1-yl]-*N*-(cyclopropylmethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-3-oxaoct-1-yl]-*N*-(cyclopropylmethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-3-oxanon-1-yl]-*N*-(cyclopropylmethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-4-oxahept-1-yl]-*N*-(cyclopropylmethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-4-oxaoct-1-yl]-*N*-(cyclopropylmethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-4-oxanon-1-yl]-*N*-(cyclopropylmethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-5-oxahept-1-yl]-*N*-(cyclopropylmethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-5-oxaoct-1-yl]-*N*-(cyclopropylmethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-5-oxanon-1-yl]-*N*-(cyclopropylmethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-6-oxaoct-1-yl]-*N*-(cyclopropylmethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-6-oxanon-1-yl]-*N*-(cyclopropylmethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-7-oxanon-1-yl]-*N*-(cyclopropylmethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

U.S. Application No. 10/696,464

Attorney Docket No. P-142-US1

Page 21 of 29

4-*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(2-hydroxyethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]oct-1-yl]-*N*-(2-hydroxyethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]non-1-yl]-*N*-(2-hydroxyethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-3-oxahept-1-yl]-*N*-(2-hydroxyethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-3-oxaoct-1-yl]-*N*-(2-hydroxyethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-3-oxanon-1-yl]-*N*-(2-hydroxyethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-4-oxahept-1-yl]-*N*-(2-hydroxyethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-4-oxaoct-1-yl]-*N*-(2-hydroxyethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-4-oxanon-1-yl]-*N*-(2-hydroxyethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-5-oxahept-1-yl]-*N*-(2-hydroxyethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-5-oxaoct-1-yl]-*N*-(2-hydroxyethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-5-oxanon-1-yl]-*N*-(2-hydroxyethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-*N*-[8-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-6-oxaoct-1-yl]-*N*-(2-hydroxyethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-6-oxanon-1-yl]-*N*-(2-hydroxyethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

U.S. Application No. 10/696,464

Attorney Docket No. P-142-US1

Page 22 of 29

4-{*N*-[9-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]-7-oxanon-1-yl]-*N*-(2-hydroxyethyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(4-*tert*-butoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(4-hydroxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(4-ethoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(4-trifluoromethoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(4-difluoromethoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxy-2-trifluoromethoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(2-difluoromethoxy-4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(2-methoxy-4-trifluoromethoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(4-difluoromethoxy-2-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-{2,4-di(trifluoromethoxy)pyrid-3-ylmethyl}piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-{2,4-di(difluoromethoxy)pyrid-3-ylmethyl}piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hep-1-yl]-*N*-(isopropyl)amino}-1-(2-ethoxy-4-trifluoromethoxypyrid-3-ylmethyl)piperidine;

U.S. Application No. 10/696,464
Attorney Docket No. P-142-US1
Page 23 of 29

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(isopropyl)amino}-1-(2-ethoxy-4-difluoromethoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(isopropyl)amino}-1-(2,4-diethoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-(*N*-methylcarbamoyl)-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-(*N,N*-dimethylcarbamoyl)-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(isopropyl)amino}-1-(4-hydroxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-(*N,N*-diethylcarbamoyl)-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(isopropyl)amino}-1-(4-hydroxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-(piperidin-1-ylcarbonyl)-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(isopropyl)amino}-1-(4-hydroxypyrid-3-ylmethyl)piperidine;

4-{*N*-[7-(3-(*S*)-1-(morpholin-4-ylcarbonyl)-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(isopropyl)amino}-1-(4-hydroxypyrid-3-ylmethyl)piperidine;
and

4-{*N*-[7-(3-(*S*)-1-Carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(isopropyl)amino}-1-[4-(2-fluoroethoxy)pyrid-3-ylmethyl]piperidine;

4-{*N*-[7-(3-(*R*)-1-Carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine; and

4-{*N*-[7-(3-(*R*)-1-Carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(isopropyl)amino}-1-(4-ethoxypyrid-3-ylmethyl)piperidine;

or a pharmaceutically-acceptable salt ~~or solvate~~ or stereoisomer thereof.

31. (Currently Amended) 4-{*N*-[7-(3-(*S*)-1-Carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(isopropyl)amino}-1-(4-methoxypyrid-3-ylmethyl)piperidine; or a pharmaceutically-acceptable salt ~~or solvate~~ thereof.

U.S. Application No. 10/696,464
Attorney Docket No. P-142-US1
Page 24 of 29

32. (Currently Amended) 4-{*N*-[7-(3-(*S*)-1-Carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(isopropyl)amino}-1-(4-ethoxypyrid-3-ylmethyl)piperidine; or a pharmaceutically-acceptable salt ~~or solvate~~ thereof.

33. (Currently Amended) 4-{*N*-[7-(3-(*S*)-1-Carbamoyl-1,1-diphenylmethyl)pyrrolidin-1-yl]hept-1-yl]-*N*-(isopropyl)amino}-1-(4-isopropoxypyrid-3-ylmethyl)piperidine; or a pharmaceutically-acceptable salt ~~or solvate~~ thereof.

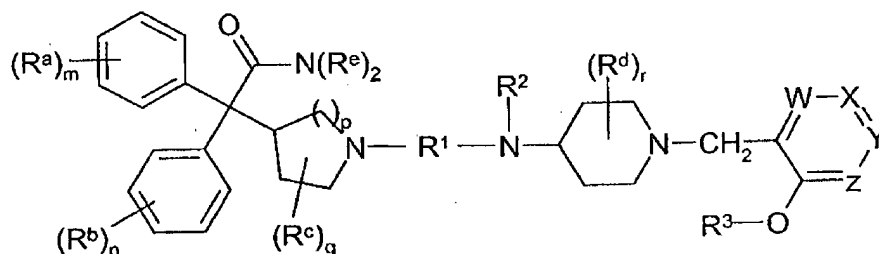
34-38. Canceled.

39. (Previously Presented) A pharmaceutical composition comprising a pharmaceutically-acceptable carrier and a therapeutically effective amount of a compound of any one of Claims 1-33.

40-43. Canceled.

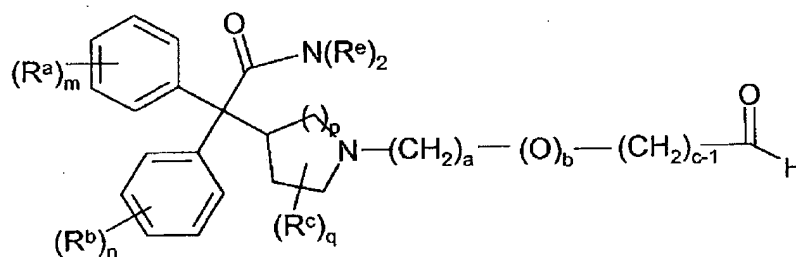
U.S. Application No. 10/696,464
 Attorney Docket No. P-142-US1
 Page 25 of 29

44. (Currently Amended) A process for preparing a compound of formula I:



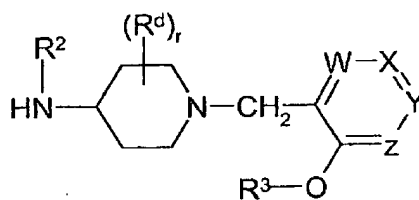
I

wherein R^1 , R^2 , R^3 , R^a , R^b , R^c , R^d , m , n , p , q , r , W , X , Y and Z are as defined in Claim 1; or a pharmaceutically-acceptable salt or solvate or stereoisomer thereof;
 the process comprising reacting a compound of formula Va:



Va

or a salt or stereoisomer or protected derivative thereof, with a compound of formula VIII:



VIII

U.S. Application No. 10/696,464
Attorney Docket No. P-142-US1
Page 26 of 29

or a salt or protected derivative thereof; and a reducing agent to provide a compound of formula I, or a pharmaceutically-acceptable salt ~~or solvate~~ or stereoisomer thereof.

45. (Original) The process of Claim 44, wherein the process further comprises the step of forming a pharmaceutically-acceptable salt of the compound of formula I.

46. Canceled.